Remarks/Arguments:

Preliminary Matters

Claims 1 - 5, 7 - 24, 26, 28 - 32, and 34 - 53 are now pending, with claims 48 - 53 newly added. Applicants note with appreciation that claims 8, 9, 29, and 30 would be allowable if rewritten in independent form. Claims 8 and 29 have been rewritten to include the limitations of claims 1 and 24, respectively, and it is respectfully submitted that claims 8 and 29 (and dependent claims 9 and 30) are in condition for allowance.

Applicants acknowledge with appreciation the withdrawal of German Patent Application No. 198 26 978.1 to Matthews et al., cited previously in the Office Action dated April 2, 2003.

Applicants further appreciate the time and courtesy extended by the Examiner during the interview held February 27, 2004 .

Claim Amendments

As mentioned above, claims 8 and 29 have been rewritten in independent form.

Claims 48 - 53 are newly added. New claim 48 depends on claim 1 and further recites that the mixture comprises at least 15% by weight of the fermented milk product. Support for this feature is found in the originally filed application at page 9, lines 19 - 21. No new matter has been added. This feature is neither disclosed nor suggested by the cited prior art (Japanese Patent No. 07-107941 to Minoru et al. and U.S. Patent No. 4,362,750 to Swartz, alone or in combination). In fact, Minoru et al. teaches away from this feature in Paragraph 0014 ("if the quantity [of the added fermented dairy product] exceeds 10 wt.%, the meat exudes a strong raw fermented smell, coming from the fermented dairy product , making it unpleasant.").

Newly added independent claim 49 is similar to claims 24 and 32 of the originally filed application in that it recites a mixture having a pH of about 5.5 or more, but does not recite a pH value for the fermented milk product. As will be explained in greater detail below, the pH value of the mixture of 5.5 or more is an important feature of claim 49.

Mixture pH of 5.5 or More

In order to provide a boiled sausage that is juicy and has a desirable texture, Applicants discovered that it is important to keep the pH of the mixture of meat emulsion and fermented milk product at about 5.5 or more. Page 5, lines 8 - 12. Specifically, Applicants discovered that if the pH of the mixture falls below the lower limit of about 5.5 and approaches the isoelectric point (about 5.0 to 5.2) of the meat, the water-retaining capacity of the meat is reduced, with the result that the juiciness and texture of the final product is impaired. Page 5, lines 12 - 16.

It is preferable to ensure that the pH of the milk/meat mixture does not fall below this lower limit of about 5.5 during mixing of the fermented milk with the meat. Page 11, lines 10 - 13. The characteristics and quantities of ingredients are therefore selected so as not to reduce the pH of the meat/yogurt mixture below the lower limit of about 5.5 identified by the Applicants, so that the emulsion retains its water binding properties to ensure that a sausage is produced that is desirably juicy and has attractive organoleptic quality. Page 13, lines 8 - 15. Applicants identified the lower pH limit of about 5.5 and maintain the pH of the mixture at about 5.5 or more so that the sausage material retains its ability to bind water, and so that a desirable juicy product is produced. Page 20, lines 22 - 25.

As described above, the feature wherein the mixture has a pH of about 5.5 or more is recited in newly added independent claim 49. To illustrate the benefits achieved by Applicants' discovery of the lower pH limit of about 5.5, cook loss tests were conducted for mixtures below and above that lower pH limit. The test results show that cook loss is sharply reduced when the pH of the mixture is 5.5 or more as opposed to a pH just below that value.

Results of the tests are enclosed. Specifically, seven (7) meat mixtures having a range of pH values were prepared as samples and cooked to determine cook loss. Enclosure 1 provides a table showing the pH values of the yogurt, meat mixture, and cooked product for each sample; a chart of the pH values; and a chart of cook loss. Enclosure 2 provides tables of data for Sample No. 1 and Sample No. 7. Enclosure 3 provides a table of data for Sample Nos. 2 to 6. Enclosure 4 provides photographs illustrating a cook loss comparison between a standard product and a product with sour yogurt according to an embodiment of the invention. Each mixture of Sample Nos. 1 to 7 included about 23% by weight of yogurt.

Sample No. 1 (highlighted in yellow on Enclosure 1) corresponds to the average (highlighted in yellow on Enclosure 2) of three meat mixture samples illustrated in Enclosure 2 under "Low pH Yoghurt" (explained in greater detail below). With reference to Sample 1 of Enclosure 1, the average mixture pH level is 5.29, which is slightly below the lower pH limit of 5.5 discovered by Applicants. To determine cook loss for Sample No. 1, a batch of the three (3) mixtures under "Low pH Yoghurt" of Enclosure 2 was weighed as a whole before and after cooking. The cook loss of Sample No. 1 was an undesirable 10% as shown on Enclosures 1 and 2.

Referring to Sample No. 2, the pH level of the mixture is 5.61 (Enclosures 1 and 3), which is slightly greater than the lower pH limit of 5.5 discovered by Applicants. In stark contrast to Sample No. 1, however, the cook loss of Sample No. 2 is surprisingly reduced to 1.42%. In other words, cook loss is sharply reduced when the pH of the mixture is about 5.5 or

more (in this case, 5.61 for Sample No. 2) as compared to a mixture having a pH just below that value (in this case, an average pH of 5.29 for Sample No. 1).

Enclosure 2 also shows average pH values of three samples of meat mixtures and their corresponding average cook loss values under "Higher pH Yoghurt," and this average is Sample 7 on Enclosure 1. In stark contrast to the 10% cook loss for Sample No. 1, when the pH level of the mixture is, for example, an average of 5.93 (highlighted in blue) as for Sample No. 7, which is greater than the lower pH limit of 5.5 discovered by Applicants, the average cook loss is a desirable 0%.

Enclosure 4 is a photograph comparing a standard sausage product with one that contains sour yogurt. As shown, the standard sausage product is drier, causing it to separate at a cut in the sausage. In contrast, the sausage product that contains sour yogurt has adequately retained moisture to avoid cracking.

35 U.S.C. § 103 Rejections

Claims 1 - 5, 7, 10 - 24, 26, 28, 31, 32, and 34 - 47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent No. 07-107941 to Minoru et al. in view of U.S. Patent No. 4,362,750 to Swartz. It is respectfully submitted, however, that the claims are patentable over the art of record for the reasons set forth below.

A problem that the present invention overcomes is the cook loss associated with meat products when significant quantities of fermented milk product are added to a meat mixture to achieve a low calorie *cooked* sausage product having a tangy taste. Applicants were therefore faced with the challenge of competing interests, i.e., 1) adding significant quantities of fermented milk product to a meat mixture to achieve a low calorie *cooked* sausage product having a tangy taste, and 2) avoiding the undesired moisture loss upon cooking associated with added quantities of fermented milk product. However, as explained above, Applicants discovered that setting a lower pH limit of the mixture of meat emulsion and fermented milk product at about 5.5 or more provides a meat product that is juicy and has a desirable texture,. Page 5, lines 8 - 12.

Most notably, and as acknowledged in the Office Action, *Minoru is silent about the sausage product pH*. As explained in the Amendment dated July 2, 2003, even if, *arguendo*, a person skilled in the art attempted to modify the fermented product of Minoru by adding substantially more fermented milk product (contrary to the teaching of Minoru), and even if a person skilled in the art attempted to cook the product of Minoru instead of fermenting it, *Minoru offers no guidance regarding how to control water loss and fails to suggest Applicants' claimed lower pH limit.*

With respect Applicants' claimed feature of the mixture comprising 10 to 40% by weight of fermented milk product, the Office Action acknowledges that Minoru specifically teaches away from the addition of more than 10% by weight of fermented dairy product, explaining that the meat exudes a strong raw fermented smell coming from the fermented dairy product, making it unpleasant. Paragraph 0014. Furthermore, each of the examples provided includes amounts of fermented milk product significantly less than 10%.

Thus, Applicants respectfully submit that a person of ordinary skill in the art would not be motivated by Minoru to control the pH of a meat mixture above a lower pH limit of about 5.5 when adding significant quantities (10 - 40% by weight) of fermented milk product. There is no suggestion in Minoru of any such lower pH limit.

Similar to Minoru, *Swartz is completely silent with respect to an overall pH of the final meat mixture*. Swartz adds yogurt strictly as a flavor enhancer, and Swartz neither discloses nor suggests a lower pH limit of about 5.5 or more for the final meat mixture as claimed by Applicants. Further, Applicants submit that Swartz's cultured dairy product parameters of 2 - 8% by weight teaches away from the desirable parameters now discovered and claimed by Applicants.

Even if, *arguendo*, a person skilled in the art were to combine the teachings of Minoru and Swartz, the person would nevertheless be left without any teaching or suggestion to set a lower pH limit for the meat mixture of about 5.5. Nor would one of skill be motivated to add significant quantities (10 - 40% by weight) of fermented milk product. Accordingly, the Office Action fails to establish *prima facie* obviousness of Applicants' claimed invention because the hypothetical combination of Swartz and Minoru lacks a claimed feature and because there is no cited suggestion or motivation in the prior art to combine the references as suggested.

More specifically, there is no motivation or suggestion in the prior art to combine Minoru with Swartz as proposed in the Office Action. To establish obviousness, such a suggestion must be demonstrated. Otherwise, the proposed combination of references should be considered to have been made in impermissible hindsight reconstruction. Applicants respectfully submit that a person of ordinary skill in the art would not be motivated to make the combination suggested by the Examiner as obvious. And Applicants' claimed feature of a mixture having a pH of about 5.5 or more is neither disclosed nor suggested by Minoru or Swartz, alone or in combination. *Prima facie* obviousness therefore cannot be established based on these references.

Non-obviousness is further supported by the test results enclosed with this paper. As explained above with reference to Enclosure 1, the average pH level of the mixture of Sample 1 is 5.29, which is slightly less than the lower pH limit of 5.5 discovered by Applicants. The cook

loss of Sample No. 1 is an undesirable 10%. The average pH level of the mixture of Sample No. 2 is 5.61, which is slightly greater than the lower pH limit of 5.5 discovered by Applicants. In stark contrast to Sample No. 1, however, the cook loss of Sample No. 2 is a surprisingly more desirable 1.42%. In other words, cook loss is significantly reduced when the pH of the mixture is 5.5 or more (in this case, 5.61) as opposed to a pH just below that value (in this case 5.29).

The drastic reduction in cook loss demonstrated by these tests results was surprising. More specifically, it was unexpected that the relatively small range of pH values for the mixture just above and below 5.5 would result in such large differences in cook loss. These parameters demonstrate the benefits achieved as a result of Applicants' claimed feature of a mixture having a pH of about 5.5 or more.

Accordingly, for the foregoing reasons, it is respectfully submitted that rejected independent claims 1, 11, 24, and 32 are patentable over the art of record. Furthermore, claims 2 - 5, 7, 10, 12 - 23, 26, 28, 31, and 34 - 47 include all the features of the independent claims from which they depend. Thus, claims 2 - 5, 7, 10, 12 - 23, 26, 28, 31, and 34 - 47 are also patentable over the art of record for the reasons set forth above.

Conclusion

In view of the remarks and points of distinction set forth above, it is respectfully submitted that the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,

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Enclosures: Test Data
Photograph

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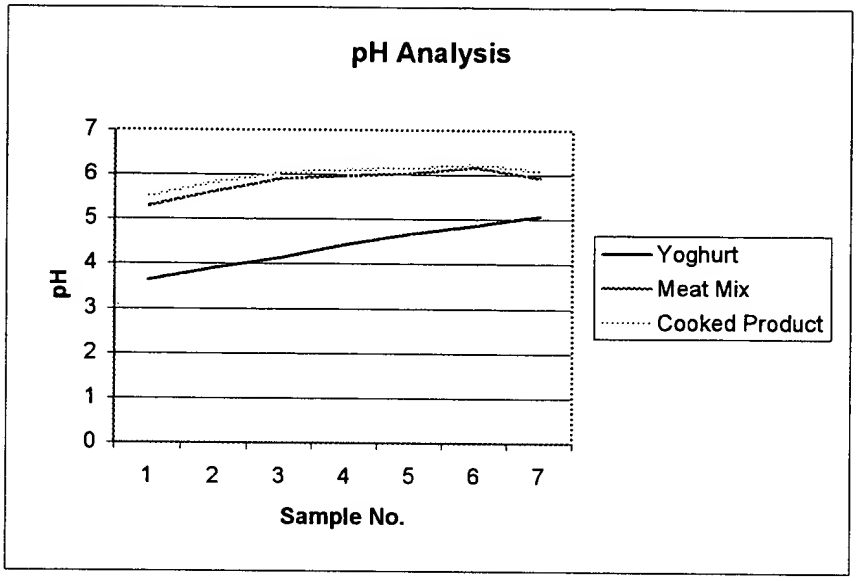
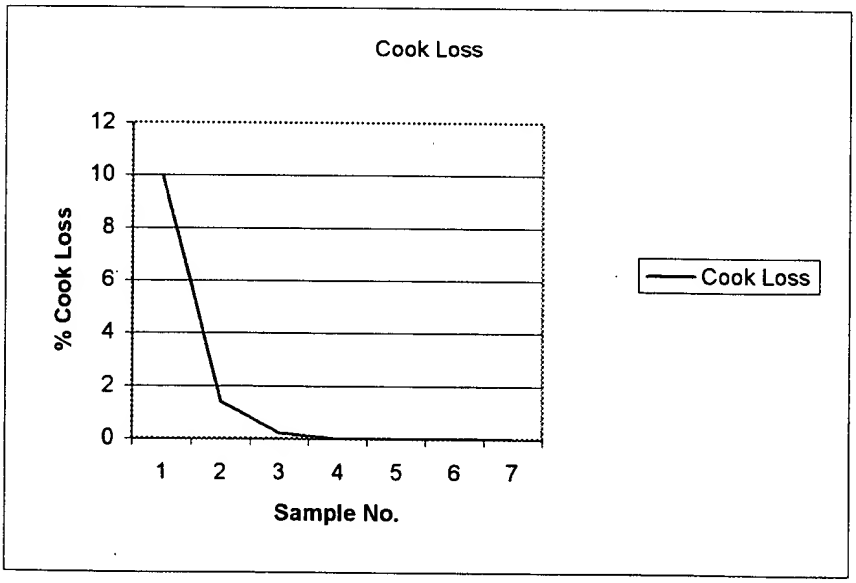
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

April 30, 2004

Joshua L. Cohen

Sample No.	Yoghurt	Meat Mix	Cooked Product	Cook Loss
1	3.63	5.29	5.51	10
2	3.91	5.61	5.83	1.42
3	4.14	5.9	6.03	0.21
4	4.43	5.98	6.11	0
5	4.68	6.03	6.15	0
6	4.86	6.17	6.25	0
7	5.07	5.93	6.09	0





Enclosure 1

Cooked Sausage Products (Puten Fleischwurst mit Joghurt Kal. 45)

	Low pH Yoghurt				Higher pH Yoghurt			
	1	2	3	average	1	2	3	average
pH of Yoghurt	3.6	3.7	3.6	3.63	5.0	5.1	5.1	5.07
ph Wert of Sausage Mix Uncooked	5.29	5.29	5.28	5.29	5.92	5.94	5.93	5.93
pH of Sausage Mix cooked	5.52	5.51	5.5	5.51	6.10	6.09	6.08	6.09
cook loss	10%				0%			

Raw Turkey Breast Steaks Marinaded

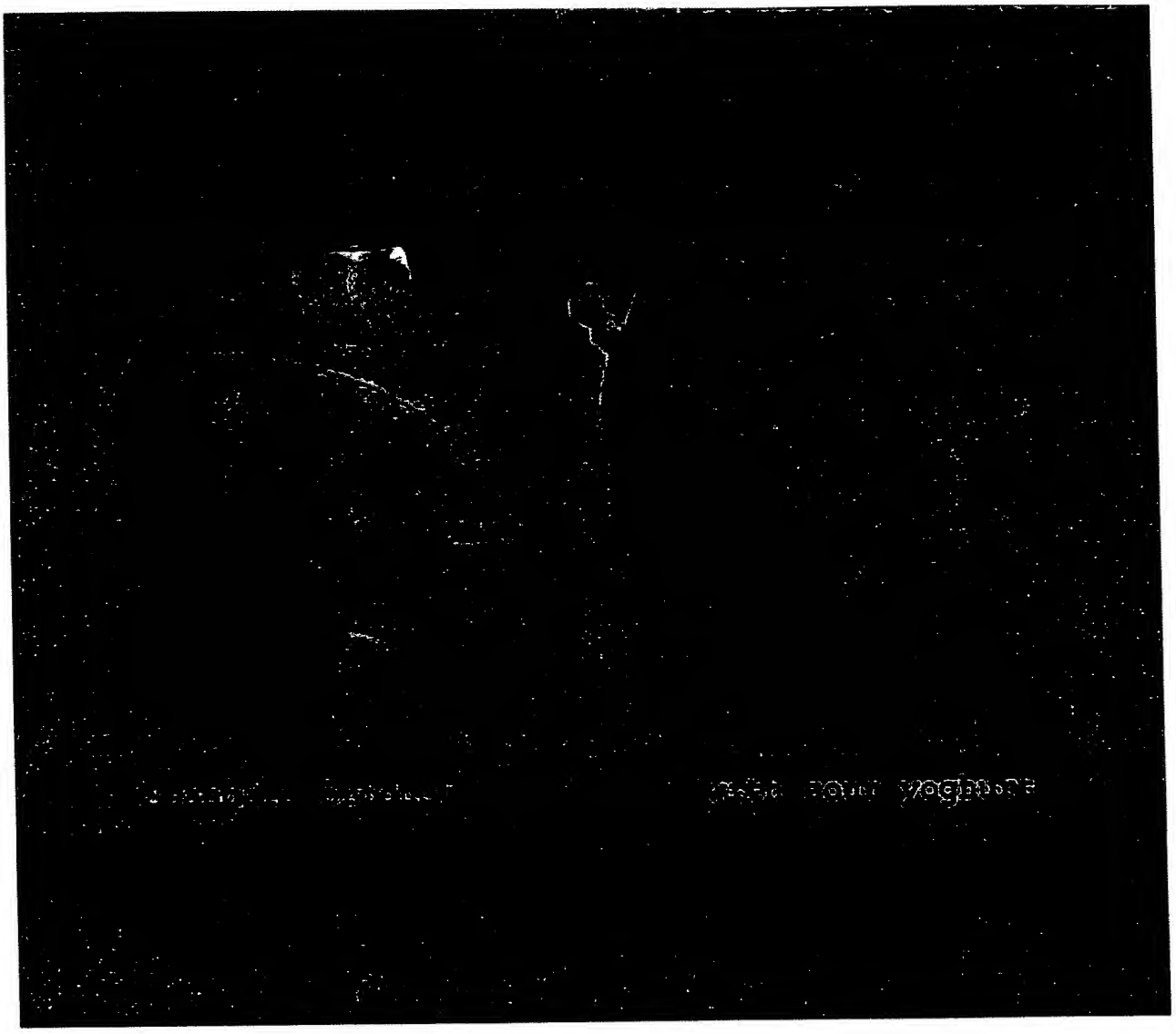
	Higher pH Yoghurt			
	1	2	3	average
pH of Yoghurt used specifically for raw meat	3.6	3.7	3.6	3.63
pH of Breast Meat	5.6	5.7	5.8	5.7
pH of marinade eg Rap´s type	4.2			
pH of Finished Product	4.97	5.19	5.37	5.18

Enclosure 2

END PRODUCT

pH Joghurt	pH Fleisch frisch	pH Brät	pH Produkt gekocht	BEFFE	P Zahl	Verlust im Endprodukt
	pH Meat	pH meat mix	pH cooked product	Lactitc acid content	P 205 value	Cook losses
3.91	6.25	5.61	5.83			1.42%
4.14	6.25	5.90	6.03			0.21%
4.43	6.25	5.98	6.11			0%
4.68	6.25	6.03	6.15			0%
4.86	6.25	6.17	6.25			0%

Enclosure 3



Enclosure 4